Moving Teacher Education Forward: A Model for a New Pedagogy

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Abstract

While the No Child Left Behind Act of 2001 dismisses the role of pedagogy in teacher education, teacher educators themselves see the need for a deeper pedagogy that includes the teaching of thinking and social emotional processes missing in traditional teacher preparation programs. This article outlines criticisms of teacher education found in NCLB and in Meeting the Highly Qualified Teachers Challenge as well as criticisms made by teacher educators and researchers. The author presents a new pedagogical model, TIEL (Teaching for Intellectual and Emotional Learning) that strengthens the preparation of teachers and outlines four principles that a new pedagogy must address. These principles include (a) connections across multiple levels, (b) communication about thinking and social emotional processes, (c) integration and balance in curriculum design, and (d) valuing the experience of both the learner and the teacher. Applications of the TIEL framework to teacher education and K-12 education are included.

I recently spoke with a district administrator from a school district that neighbors New York City. When I told her that I was a teacher educator, her expression became serious as she spoke of the need for quality teacher education. She began to discuss the *No Child Left Behind Act of 2001*, expressing frustration with the paperwork involved, the excessive testing, meeting standards, and the extraordinary pressure that rippled from the top administrator to the teacher in the classroom.

I asked her what she would have teacher educators do to prepare teachers. Her reply was simple and direct. Showing an acute understanding of K-12 standards and the needs of classroom teachers, she said, "Teach them higher order thinking skills. They need to know how to ask questions that require higher-order thinking. They need to know how to plan and implement project work and how to differentiate curriculum."

This administrator had strong criticism for the *No Child Left Behind Act*. Yet, she shares with NCLB a concern for high quality teaching and high quality teacher education. Criticism of teacher education programs comes from many vantage points including teacher education itself (Darling-Hammond, 1997; Goodlad, 1990; Tom, 1997). Teacher educators and researchers have long expressed concern about the effectiveness of preparing candidates who will be high quality teachers. The purpose of this article is to look at the criticism of pedagogy in teacher education from the point of view of NCLB and teacher educators themselves; to formulate four principles that a new pedagogy must meet; and to introduce a new model of curriculum and instruction that can strengthen the preparation of preservice teachers.

Accepted for publication in *Teacher Education and Practice.* Submitted November 2004, accepted May 2005.

Meeting the Highly Qualified Teachers Challenge

Teacher education does not fare well in the document entitled *Meeting the Highly Qualified Teachers Challenge* (U.S. Department of Education, 2002), a companion document that elaborates on Title II of the *No Child Left Behind Act of 2001*. Title II, *Preparing, Training, and Recruiting High Quality Teachers and Principals*, states that "all teachers in core academic subjects be highly qualified by the end of the 2005-2006 school year" (p. vii). According to Congress, highly qualified teachers are defined as those who possess "full state certification, have solid content knowledge verified through passing state tests in subject knowledge, and have strong academic backgrounds" (p. vii).

However, highly qualified does not necessarily mean high quality. While having state certification is part of the definition of a "highly qualified teacher," *Meeting the Highly Qualified Teacher Challenge* is critical of state certification systems and the teacher preparation programs that lead to certification. The document states that "burdensome requirements" (p. viii) of state systems for certification discourage those with content expertise from entering K-12 teaching, while at the same time allowing others with inadequate content knowledge to receive certification.

The criticism of teacher education programs extends beyond structures dictated by certification requirements to the effectiveness of pedagogy in coursework. The *Meeting the Highly Qualified Teachers Challenge* cites the National Center for Education Statistics (NCES), who reports that

> Fewer than 36% of new teachers feel "very well prepared" to implement curriculum, and performance standards, less than 30% feel prepared to integrate technology into instruction, and less than 20 % feel prepared to meet the needs of diverse students or those with limited English proficiency. (p.15)

Congress takes the point of view that content knowledge, verbal ability, and successful academic scores indicate a highly qualified teacher and are sufficient for certification. *Meeting the Highly Qualified Teachers Challenge* states that alternative programs such as Teach for America and Troops to Teachers are more successful in preparing teachers and retaining teachers than traditional teacher education programs. Citing the poor track record of teacher education programs that are the entry point for certification, the document suggests that what is needed are more alternative roads to becoming a teacher that bypass teacher education.

Teacher Educators and Researchers

Meeting the Highly Qualified Teachers Challenge directs sharp criticism at teacher education, yet teacher educators themselves also articulate shortcomings of pedagogy in teacher preparation programs (Ashton, 1996; Darling-Hammond, 1997; Dewey, 1964; Good, 1990; Goodlad, 1990; Hill, 2000; Hollingsworth, 1989; Labaree, 1998; Lieberman, 1991; Sarason, 1982; Tom, 1997). Tom cites four common criticisms, "education courses are vapid, impractical, segmented, and muddled (or lacking direction)" (p. 45). Others have pointed to a weak knowledge base in the teacher knowledge field (Good; Labaree; Lieberman). Good describes the knowledge base in instruction as "less coherent and less integrated" than in other professional schools such as "business, medicine, and law" (p. 226-227). Labaree refers to the study of teaching and learning as a soft knowledge field in which the "intellectual terrain is considerably less clearly defined" than in the hard sciences (p. 5).

The literature on preservice and inservice education reports that minimal change in thinking or practice results from most teacher preparation or professional development programs (Ashton, 1996; French & Rhoder, 1992; Goodlad, 1990; Hollingsworth, 1989; Little, 1993; National Commission on Teaching and America's Future, 1996; Smith & O'Day, 1990). While many observe that teacher preparation programs have minimal effect in changing candidates thinking, many also observe the lack of teaching thinking itself as a problem in the pedagogy (Ashton; French & Rhoder; Goodlad; Hill, 2000; Sarason, 1982). Sarason in his many visits to classrooms noted that the discussion and teaching of thinking was missing. When he discussed this situation with the teachers he observed, they reported that the teacher education programs they attended did not prepare them to teach or discuss thinking with their students (p. 220). Wasserman et al. provide the rationale for Sarason's findings: "Teachers haven't been trained to think effectively themselves … [and] teachers haven't been trained to teach thinking skills and strategies" (as cited in French & Rhoder, p. 61).

Almost two decades after Sarason, Ashton (1996) points out the "wide range of knowledge and experiences not typically included in teacher preparation programs today" (p. 22). These include (a) interaction of social, emotional, and cognitive forces in learning; (b) new conceptions of teaching consistent with a complex view of students; (c) new conceptions of intelligence; and (d) new conceptions of motivation and assessment. Each of these factors centers on knowledge of intellectual and emotional processes that address thinking and social-emotional components of teaching and learning.

Hill (2000) reports similar findings about the intellectual development of preservice teachers, stating that "we do not educate our teachers to engage with children intellectually… if we want teachers to be educators then we must educate them" (p. 50). According to Hill, "teachers must be given opportunities, support, and challenge to become reflective, critical, and creative thinkers, to grow intellectually, to engage in a process of constant transformation" (p. 50).

Principles of a New Pedagogy

The brief critique of teacher preparation programs points out what is missing in traditional teacher education. In light of this, Darling-Hammond (1997) writes about teachers needing access to additional knowledge of teaching, saying, "When educators denied access to appropriate preparation and training prove unable to manage complex forms of teaching, policymakers typically revert to simplistic prescriptions for practice, even though these prescriptions cannot achieve the goals they seek" (p. 13). NCLB and its companion document, *Meeting the Highly Qualified Teachers Challenge,* are examples of policymakers "revert[ing] to simplistic prescriptions." While NCLB reduces the definition of teaching to expertise in subject matter only, teachers need pedagogical knowledge that can help them organize subject-matter around "intellectual principles" (Dewey, 1964, p. 328). That is to say, teachers need to learn a pedagogy that includes the teaching of intellectual processes. Instead of a "divorce between scholarship and method" (p 331), there needs to be a new, stronger kind of union between the two.

However, focusing on cognitive processes in and of themselves does not adequately address just how complex good instruction is. Darling-Hammond (1997) speaks of the emergence of "complex forms of instruction [that] nurture the spirit as well as the mind" (p. 5-6). Beyond the pedagogy of thinking, teacher candidates need instruction that addresses the social-emotional components of teaching and learning.

Teacher education programs are currently teaching a pedagogy of the past. Instead of the complex forms of instruction that require skillful integration of intellectual and social-emotional processes within given

subject matter, traditional teacher education offer inexplicit, ineffective pedagogy that does not change teachers' thinking or practice (Hill, 1990; Hollingsworth, 1989). Instruction that prepares teacher candidates to intellectually organize subject matter, teach students how to think, and help students develop positive social emotional characteristics requires new elements of pedagogy.

The following section introduces a new pedagogical model that strongly supports the explicit instruction of intellectual and social emotional processes that are integrated with subject matter content. Given the needs in teacher education, a new pedagogy must facilitate connections from teacher preparation coursework to the teacher in the classroom to K-12 student performance. It must help candidates recognize the intellectual and social emotional connections that are present across national, state, and program guidelines. A new pedagogy must include a language that facilitates the discussion of thinking and social emotional processes in the classroom. A new pedagogy must help teachers develop curriculum that integrates and balances a wide range of thinking and social emotional processes within subject matter content. Finally, a pedagogy that can transform teachers thinking and practice must value the experience of both the learner and the teacher (Author, 2004). The TIEL Design Wheel framework addresses these four principles: (a) connections across multiple levels, (b) communication about thinking and social emotional processes, (c) integration and balance within curriculum design, and (d) valuing the experience of both learner and teacher.

New Model: Teaching for Intellectual and Emotional Learning

Teaching for Intellectual and Emotional Learning (TIEL®) is a powerful pedagogical framework for thoroughly preparing teachers to meet the complex demands of today's classroom. The TIEL framework facilitates teaching and learning that involves understanding and implementation of intellectual and social-emotional processes in the K-12 classroom (Author, 2004).

The TIEL framework employs a Design Wheel (see Figure 1) that helps teachers understand the intellectual and social-emotional processes that support self-organized learning wherein students make decisions, plan, and evaluate their own work. The TIEL Design Wheel is a graphic organizer divided evenly into ten segments and shows the interaction between cognitive and social-emotional processes. The five segments in the upper half of the wheel represent social-emotional characteristics or, as Dewey (1964) referred to them, "qualities of character" (p. 197). The five qualities of character include *appreciation, mastery, ethical reasoning, empathy,* and *reflection*. The lower half of the wheel represents intellectual operations or thinking processes (Guilford, 1977). The five thinking operations include *cognition* (research, discovery, gathering information), *memory* (recall, remembering, and connection-making), *evaluation* (critical thinking, assessment, and the self-management processes of decision making, planning, and self-evaluation), *convergent production,* (developing a product that involves logical thinking, one right answer), and *divergent production,* (developing a product that involves creativity, risk-taking, and imagination). The TIEL Design Wheel is color coded to visually facilitate learning at all levels. The discussion that follows will provide illustrations of how the TIEL framework is applicable to K-12 and teacher education.

Application of TIEL to Cognitive and Social-Emotional Instruction

Implemented throughout teacher preparation coursework, TIEL addresses the key principles of facilitating connections, providing clear communication, balancing thinking and social-emotional processes within curriculum design, and valuing the experience of teacher and learner (See Figure 2).

Principle 1: Connections across Multiple Levels

The TIEL framework helps teachers forge connections from coursework to the classroom as well as across national, state, and program guidelines. TIEL facilitates the transfer of learning from the teacher educator to the teacher candidate to the K-12 student by focusing on the intellectual and social-emotional processes common to the teachers and learners at each level. The following is an example of how a teacher educator used the TIEL Design Wheel to plan instruction in a social studies project-based curriculum course.

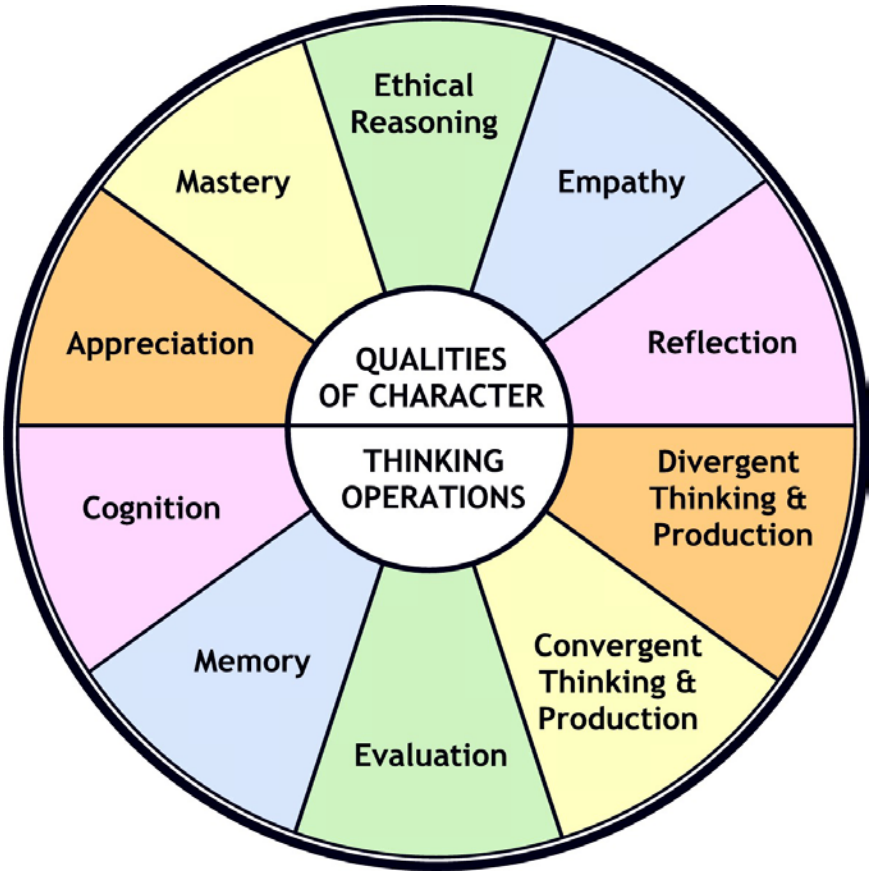

Figure 1. TIEL Design Wheel

The major project of the course is a project-based curriculum unit based on social studies content. This unit must contain a culminating project that their students will research, develop, and present in their classrooms. Prior to beginning the project-based unit, teacher candidates designed a small project on a

social studies content topic similar to the culminating project there own students would do. The purpose of this project was for candidates to become conscious of the self-management processes of decision making, planning, and self-evaluation that K-12 students will experience in developing their projects.

The instructor used the TIEL Design Wheel to frame the self-management processes of decision making, planning, and self-evaluation found in the component *evaluation* (see Figure 1). Before candidates began work on the simulated culminating project, candidates participated in setting the criteria for evaluation of the completed project. The instructor's role is to model a questioning process that helps candidates develop criteria to use in evaluating the projects. The instructor supplied the first criterion that the project must contain a visual, written, and spoken component. Working together, candidates added other criteria for evaluating their projects that included the following. The visual clearly connects to the topic; the writing explains the project and uses standard writing conventions; and the speaking presentation is organized and clearly spoken.

Principles of a New Pedagogy	How TIEL Addresses these Principles
Makes connections across multiple levels	• Fosters transfer from teacher educator to teacher candidate to candidate as teacher to K-12 student • Supports connections across program, state, and national standards
Provides visibility and Communication	• Graphic organizer that makes thinking and social emotional processes visible to learners at all levels • Provides language with which to discuss learning, thinking, and feeling
Facilitates integration and Balance	• Helps educators integrate and balance intellectual processes and social emotional processes • Balances convergent and divergent production • Integrates self-management skills into student work
Values the experience of teacher and learner	• Values common sense about learning and teaching • Supports development of confidence through mastery • Supports responsibility and leadership through decision making, planning, and evaluation • Supports motivation through creativity • Values engagement in learning and teaching through understanding underlying processes

Figure 2. Summary of principles for new pedagogy and how TIEL addresses them

After the parameters of the project were defined, candidates proposed possible topics they would like to explore for their projects. Following questions from the instructor, the candidates developed criteria that would facilitate the decision making process involved in selecting a topic. Collaboratively, the candidates developed criteria that included: "Do I have enough time to do a project on this topic?" "Can I find the resources?" "Am I most interested in this topic?" Applying the criteria to the possible topics, candidates made decisions about their projects. After the candidates chose the topics for their projects, they developed a written plan that included a description of the project, the audience, and the due date. The plan also included the criteria for evaluating the project that was developed as a group prior to beginning the project. In addition, the plan stated the materials needed for research and development of the project; the steps required to complete the project; and a list of possible problems they may encounter in the course of developing their project.

Candidates learn to develop curriculum that includes the explicit teaching of intellectual processes through a combination of experience, discussion, and application. First, candidates experience the processes of self-management through their own project. When candidates become conscious of the experience of using thinking processes themselves, they learn to design curriculum and instruction for their students that will include these same processes (Author, 2004). Second, instruction is reinforced through metacognitive discussions focusing on the thinking processes and social-emotional processes candidates are experiencing. The importance of each process is analyzed and candidates determine how each fits into the larger context of thinking and social-emotional processes represented by the TIEL Design Wheel. By candidates becoming aware of and being able to discuss their thinking, they learn how to replicate similar discussions about thinking and learning with their own students. Third, candidates plan lessons that include processes of thinking for K-6 students. Those who are inservice teachers practice these processes in learning activities they prepare and implement in their own classrooms. Those who are preservice teachers practice these processes in their fieldwork settings or in learning activities demonstrated with classmates.

The TIEL framework also facilitates connections across program, state, and national standards typically used in teacher preparation programs. The TIEL framework can be used to help teacher candidates understand the intellectual connections that exist within NCATE Standards, the teacher education program's conceptual framework, and K-12 State Standards. In fact, the TIEL model closely aligns with NCATE instructional standard 3c that states "*candidates understand and use a variety of teaching strategies that encourage elementary students' development of critical thinking, problem solving, and performance skills*" (National Council for Accreditation of Teacher Education, 2000, p.8). From a program perspective, most conceptual frameworks guide curriculum design and evaluation of program outcomes. At Lehman College, one of the conceptual frameworks themes is *Education for Social Action*. This theme involves helping candidates understand the history of underserved populations and the importance of access and equity with regard to class, race, gender, and technology. To successfully address this theme requires that students be able to demonstrate the practical skills of *decision making, planning, and evaluating* that are involved in *critical thinking*, *problem-solving* and *performing a task*, skills essential in taking social action (*Lehman Urban Teacher*, 2003).

Beyond NCATE and program standards, state and national curriculum standards require that K-12 students demonstrate intellectual skills necessary to meet specific criteria. For example, New York State Social Studies standards include five content categories: History of the United States and New York, World History, Geography, Economics, and Civics. The description for each of these standards begins, "Students will use a variety of *intellectual skills* to demonstrate their understanding of [each content area]" (New York State Education Department, 1996).

Standards at every level, program, NCATE, state, and national require teacher preparation programs to teach thinking processes to their candidates who, in turn, can teach these same processes to their K-12 students. This is best accomplished through the use of the TIEL Design Wheel and the five intellectual components. The five TIEL components also help candidates understand and implement the *critical thinking, problem-solving, and performance skills* necessary to meet the range of standards that govern teacher preparation.

Principle 2: Communication about Thinking and Social-Emotional Processes

The TIEL framework facilitates clear communication about the thinking and social-emotional processes involved in teaching and learning. The TIEL Design Wheel is a powerful graphic organizer that makes the intellectual and social-emotional processes of complex teaching and learning visible to teacher educators, teachers, and K-12 students. The TIEL framework provides a language for the teacher educator to communicate with teacher candidates about the thinking processes involved in curriculum development and instruction.

The TIEL framework facilitates clear communication about thinking in several ways. It provides a graphic representation that codifies fundamental thinking and social emotional components of teaching and learning. The TIEL framework includes names for each thinking operation and social-emotional characteristic providing a language with which to discuss learning, thinking, and feeling in large and small group settings. The components of the TIEL Wheel are color-coded to facilitate learning at any age allowing young students to identify thinking processes by color (Author, 2004).

Principle 3: Integration and Balance in Curriculum Design

It is clear that traditional teacher preparation programs do not include the explicit teaching of thinking or social emotional processes. When teachers are unaware of a broad range of thinking and emotional processes that can be included in curriculum planning, instruction is often weighted towards learning activities that require limited kinds of thinking. TIEL helps teacher candidates learn how to plan learning activities that integrate a range of thinking and social emotional processes within subject matter content, while maintaining a balance between the intellectual and social emotional processes involved in teaching and learning (Author, 2004). Just as cooking is facilitated by a well-stocked, clearly labeled pantry that is within reach, TIEL makes a broad range of intellectual and social-emotional components accessible to teacher educators and teachers for development of curriculum and instructional activities.

When teacher educators and teachers are aware of the components of the TIEL Design Wheel, they can more effectively integrate a range of thinking and emotional components into their planning (Author, 2004). In the process of planning for instruction, teacher educators can help teachers ask themselves: "Have I balanced activities requiring convergent thinking with those activities that support divergent thinking?" "Are there places in my instruction that I might integrate more learning activities involving creativity?" "How can I plan for students to gather information in multiple ways?" "How am I helping students make connections?" "Where in my curriculum can I include a project that will integrate the explicit teaching of the self-management skills, decision making, planning, and self-evaluation?"

While the TIEL framework can help teacher educators teach candidates to integrate thinking and emotional processes into their curriculum and instruction, the TIEL framework can help teacher educators create balance within that instruction. For example, teacher educators can ask themselves the following

questions. Does my curriculum reflect a balance between the intellectual work of learning to teach and the social-emotional aspects of building a community of learners with candidates? Does my curriculum balance requirements for reflecting on teaching with teaching the content of subject matter and the thinking and social emotional processes that underlie curriculum development?

Principle 4: Valuing the Experience of the Teacher and the Learner

The TIEL framework values the experience of both the teacher and the learner. TIEL supports a teacher's capacity to teach while enhancing a teacher's love of teaching. Teachers, who understand how to reach students intellectually and know what social-emotional outcomes can be expected, are able to plan curriculum and instruction more effectively (Author, 2004). To illustrate, the TIEL Design Wheel shows the connection between the processes of evaluation and ethical reasoning situated with empathy and appreciation. Awareness of these connections reminds teachers that ethical reasoning involves the processes of decision making permeated with empathy and appreciation for others and their situations. This reminds teachers of the importance of developing questions that will help K-12 students analyze decisions and the effects those decisions have on others.

At the same time, TIEL supports a student's capacity to learn while kindling and sustaining a student's love of learning. When students are given the opportunity to gain an understanding of their thinking and learning, they participate more fully in learning activities. When students are given the opportunity to participate in learning activities that take into account their intellectual and social emotional capacities, they become more engaged. When they are taught self-management skills, they take ownership in their work students (Author, 2004).

The TIEL Design Wheel is an articulation of the common sense about teaching and learning that teacher educators and teachers intuitively know. The TIEL Design Wheel reminds teacher educators and teachers of the processes that foster confidence, responsibility and leadership, motivation, and engagement in learning for students and teachers as well. Teachers know that *mastery* in a skill or subject area develops confidence. TIEL places mastery and evaluation within a larger context of intellectual and social-emotional components that are necessary in helping students develop mastery and succeed in assessment. Teachers know that the opportunity to manage one's own learning through decision making, planning, and self-evaluation encourages responsibility and builds capacity for leadership. They know that opportunities to use creativity result in greater student self-motivation.

Conclusion

The emphasis of the NCLB Act on content, verbal ability and alternative paths to teaching that involve little instruction in pedagogy is limited in accomplishing the goal of placing a quality teacher in every classroom or assisting every child to meet rigorous standards. At a time when NCATE, state standards, and teacher preparation program frameworks include the teaching of intellectual and social emotional processes, the NCLB Act not only does not recognize what is necessary to meet the laudable goals found within its pages, the overemphasis on testing prevents teachers from the kind of teaching that encourages a wide range of thinking in students. While NCLB supports teacher preparation separate from pedagogical instruction, many teacher educators realize that a deeper pedagogy is needed that includes the teaching and discussion of thinking. Teacher educators who advocate preparing teacher candidates to

teach intellectual and social emotional processes point to an important missing component in the preparation of high quality teachers. Dewey (1964) has said,

> Only a teacher thoroughly trained in the higher levels of intellectual method and who thus has constantly in his own mind a sense of what adequate and genuine intellectual activity mean, will be likely, in deed, not in mere word, to respect the mental integrity and force of children. (p. 329)

Dewey would strongly agree with the importance of content knowledge as expressed in NCLB, but within a pedagogy that includes the intellectual principles around which that content must be organized.

In teacher education, thinking and social emotional process is an important part of the knowledge base of pedagogy and must be taught as explicitly as subject matter content must be taught. A new pedagogy is needed that includes this missing component. Teaching for Intellectual and Emotional Learning (TIEL) is a pedagogical tool that can assist teacher educators in preparing highly qualified teachers, who are also of high quality, by placing intellectual method and intellectual activity at the center of learning and teaching.

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